Author Index

Ichihashi, Y., 185 Inal, O. T., 83, 205

Killen, P. D., 231

Atamert, S., 101	Kim, J. J., L7	Pak, H. R., 83
	Kieselev, I. K., 29	Pak, J. S. L., 83
Banerjee, D., 151	Kloc, L., 61, 165	, , , , , , , , , , , , , , , , , , , ,
Beaven, P. A., 173	Krupin, Yu. A., 29	Rabin, B. H., L1
Bhadeshia, H. K. D. H., 101	·	Rao, K. B. S., 67
*	Lal, D. N., 37	Ritchie, R. O., 193
Čadek, J., 61, 165	Lee, S., 1	Ross, R. A., 119
Cousin, P., 119	Lee Pak, J. S., 83	Ryu, J. H., L7
Durman, M., 247	Liu, Q., 113	11, 0, 0.11., 27
	Llorca-Isern, N., 241	Sawalha, K., 247
Edelson, L. H., 193		Scardi, P., 257
Es-Souni, M., 173	Mannan, S. L., 67	Senior, B. A., 51
Evans, G. M., 173	Marchetti, F., 257	Smith, E., 11
	Margolin, H., 139	St. John, D. H., 231
Fiala, J., 61, 165	Meyers, C. A., 127	
	Milne, S. J., 263	Takada, F., 185
Geng, L., 113	Mishra, R. S., 151	Tewari, S. N., 219
Gialanella, S., 257	Molinari, A., 257	Tiziani, A., 257
Grummon, D. S., 127	Mostaghaci, H., 263	Turčič, B., 17, 21
Guilemany, J. M., 241	Mukherjee, K., 83	, , , , , , , , , , , , , , , , , , , ,
• • • • • • • • • • • • • • • • • • • •	Murphy, S., 247	Valsan, M., 67
Hoshiya, T., 185		
Hsueh, CH., L11	Nma, S. W., L7	Wang, SD., 1
Hu, X., 139	Namboodhiri, T. K. G., 37	Wang, W., 93
		Wu, K., 113
	0.1 177 205	,,

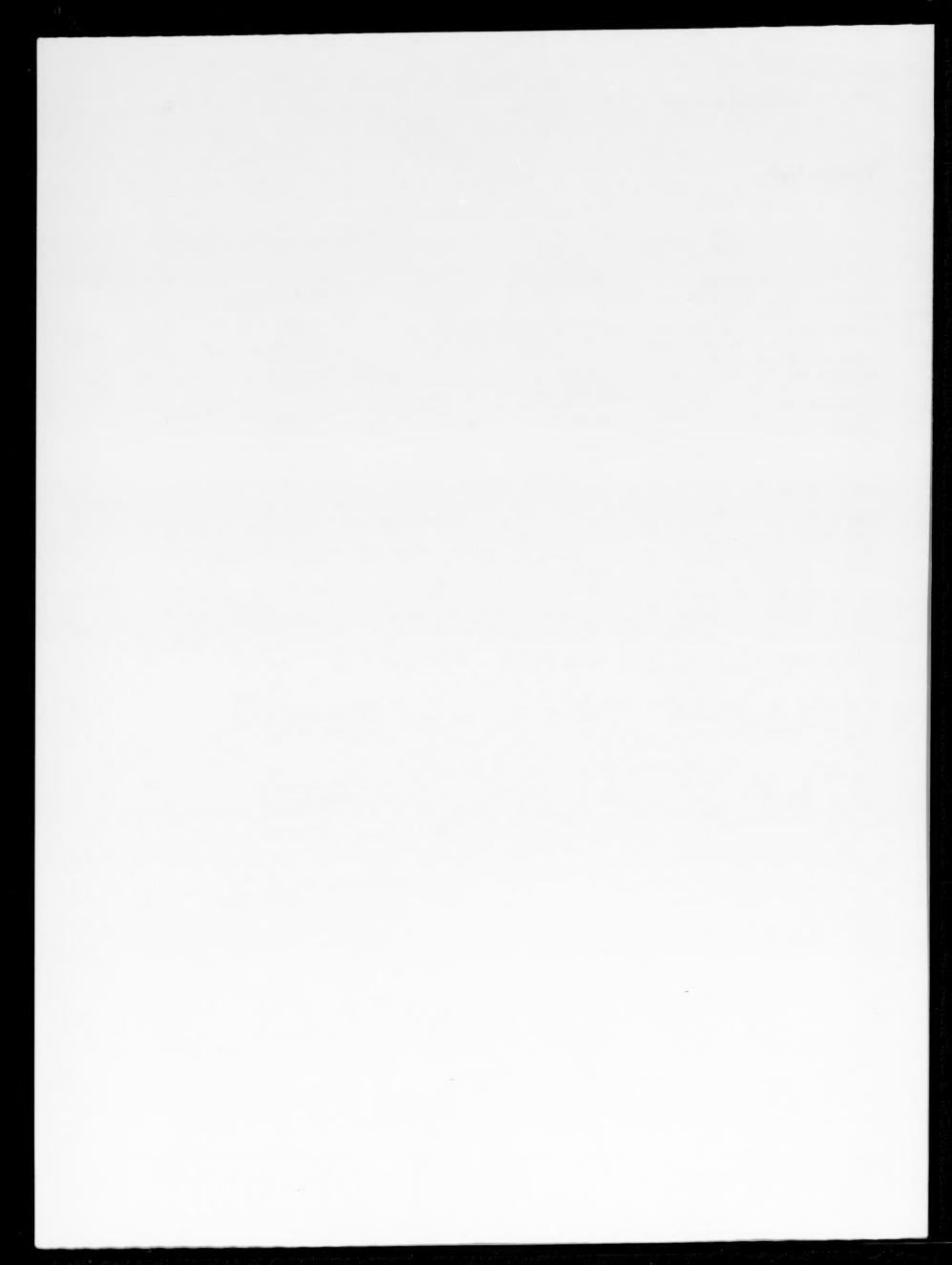
Ozbaysal, K., 205

Page, N. W., 231

Pak, H.-R., 185

Xu, Y., 93

Yao, C. K., 113



Subject Index

Alloying

relationships between microstructure and properties of unalloyed compacted graphite cast irons, 241

Alloys

creep in a Cu-14at.%Al solid solution alloy at intermediate temperatures and low stresses, 165

crystal structures and microstructures of (Ni,Cu)₃Sn alloys, 83

electron metallographic study of the commercial zincbased pressure-die-cast alloy 3, 247

microstructure and stability of Fe-Cr-C hardfacing alloys, 101

restoration phenomena of neutron-irradiated Ti-Ni shape memory alloys, 185

Aluminium

creep in a Cu-14at.%Al solid solution alloy at intermediate temperatures and low stresses, 165

microdiffraction study of β -SiC whiskers in an SiC_W-6061Al composite, 113

microstructural characterization of $\alpha_2 + B2$ titanium aluminide intermetallic (super- α_2) using transmission electron microscopy, 193

microstructure and steady state creep in Ti-24Al-11Nb, 151

Carbon

joining of fiber-reinforced SiC composites by in situ reaction methods, L1

microdiffraction study of β -SiC whiskers in an SiC_w-6061Al composite, 113

microstructure and stability of Fe-Cr-C hardfacing alloys, 101

microstructure of copper-bearing C-Mn weld metal: aswelded and stress-relieved states, 173

thermodynamics and structure of solidification in the fusion zone of CO₂ laser welds of 15-5 PH stainless steel, 205

Cavitation

cavitational damage in AISI type 347 weld metal arising from creep deformation, 51

Chromium

microstructure and stability of Fe-Cr-C hardfacing alloys, 101

Cobalt

study of the diamond-matrix interface in hot-pressed cobalt-based tools, 257

Compaction

relationships between microstructure and properties of unalloyed compacted graphite cast irons, 241

sintering enhancement in dynamically compacted commercial iron powders, 231

Composites

fatigue damage periods in composite laminates, 17

joining of fiber-reinforced SiC composites by in situ reaction methods, L1

microdiffraction study of β -SiC whiskers in an SiC_w-6061Al composite, 113

"natural" phenomenological fatigue damage cumulation model for composite laminates, 21

Copper

creep in a Cu-14at.%Al solid solution alloy at intermediate temperatures and low stresses, 165

crystal structures and microstructures of (Ni,Cu)₃Sn alloys, 83

microstructure of copper-bearing C-Mn weld metal: aswelded and stress-relieved states, 173

Corrosion

effect of structural factors on corrosion crack resistance parameters, 29

Crack extension

crack extension in a material whose resistance to deformation increases with increasing strain, 11

Crack initiation

sensitivity of surface crack initiation to surface roughness in low-cycle fatigue at high temperature, 507

Crack propagation

model for the effect of mean stress on the threshold condition for fatigue crack propagation, 37

Crack resistance

effect of structurl factors on corrosion crack resistance parameters, 29

Cracks

analysis of the elastic interaction between an edge dislocation and an internal crack, 1

crack extension in a material whose resistance to deformation increases with increasing strain, 11

effect of structural factors on corrosion crack resistance parameters, 29

model for the effect of mean stress on the threshold condition for fatigue crack propagation, 37

Creep

cavitational damage in AISI type 347 weld metal arising from creep deformation, 51

creep in a Cu-14at.%Al solid solution alloy at intermediate temperatures and low stresses, 165

microstructure and steady state creep in Ti-24Al-11Nb, 151

new procedure to evaluate creep data obtained by the helicoid spring specimen technique under conditions of non-viscous creep behaviour, 61

Crystal nucleation

crystal nucleation and glass formation in undercooled Pd-Ni-P melts, 93

Crystal structures

crystal structures and microstructures of (Ni,Cu)₃Sn alloys, 83

Deformation

cavitational damage in AISI type 347 weld metal arising from creep deformation, 51

crack extension in a material whose resistance to deformation increases with increasing strain, 11

Dendrite

dendrite tip radii in directionally solidified Pb-8.4at.%Au, 219

Diamond

study of the diamond-matrix interface in hot-pressed cobalt-based tools, 257

Dislocations

analysis of the elastic interaction between an edge dislocation and an internal crack, 1

dislocation distributions in non-uniform stress fields, 139

Drving

influence of different drying conditions on powder properties and processing characteristics, 263

Elasticity

analysis of the elastic interaction between an edge dislocation and an internal crack, 1

Electron metallography

electron metallographic study of the commercial zincbased pressure-die-cast alloy 3, 247

Fatigue

fatigue damage periods in composite laminates, 17

finite element model of persistent slip band interaction with strengthened surface films during low cycle fatigue, 127

model for the effect of mean stress on the threshold condition for fatigue crack propagation, 37

"natural" phenomenological fatigue damage cumulation model for composite laminates, 21

sensitivity of surface crack initiation to surface roughness in low-cycle fatigue at high temperature, L7

strain-controlled low cycle fatigue behaviour of type 304 stainless steel base material, type 308 stainless steel weld metal and 304-308 stainless steel weldments, 67

Fibre pull-out

theoretical comparison of two loading methods in fiber pull-out tests, L11

Fibres

joining of fiber-reinforced SiC composites by in situ reaction methods, L1

theoretical comparison of two loading methods in fiber pull-out tests, L11

Finite element modelling

finite element model of persistent slip band interaction with strengthened surface films during low cycle fatigue, 127

Fusion zone

thermodynamics and structure of solidification in the fusion zone of CO₂ laser welds of 15-5 PH stainless steel, 205

Glass

crystal nucleation and glass formation in undercooled Pd-Ni-P melts, 93

Gold

dendrite tip radii in directionally solidified Pb-8.4at.%Au, 219

Graphite

relationships between microstructure and properties of unalloyed compacted graphite cast irons, 241

Helicoid spring specimen technique

new procedure to evaluate creep data obtained by the helicoid spring specimen technique under conditions of non-viscous creep behaviour, 61

Hot pressing

study of the diamond-matrix interface in hot-pressed cobalt-based tools, 257

Interfaces

study of the diamond-matrix interface in hot-pressed cobalt-based tools, 257

Iron

microstructure and stability of Fe-Cr-C hardfacing alloys, 101

relationships between microstructure and properties of unalloyed compacted graphite cast irons, 241

sintering enhancement in dynamically compacted commercial iron powders, 231

Joining

joining of fiber-reinforced SiC composites by in situ reaction methods, L1

Laminates

fatigue damage periods in composite laminates, 17

"natural" phenomenological fatigue damage cumulation model for composite laminates, 21

Lead

dendrite tip radii in directionally solidified Pb-8.4at.%Au, 219

Loading

theoretical comparison of two loading methods in fiber pull-out tests, 511

Manganese

microstructure of copper-bearing C-Mn weld metal: aswelded and stress-relieved states, 173

Mechanical properties

relationships between microstructure and properties of unalloyed compacted graphite cast irons, 241

Melts

crystal nucleation and glass formation in undercooled Pd-Ni-P melts, 93

Microdiffraction

microdiffraction study of β -SiC whiskers in an SiC_w6061Al composite, 113

Microstructure

crystal structures and microstructures of $(Ni,Cu)_3Sn$ alloys, 83

microstructural characterization of $\alpha_2 + B2$ titanium aluminide intermetallic (super- α_2) using transmission electron microscopy, 193

microstructure and stability of Fe-Cr-C hardfacing alloys, 101

microstructure and steady state creep in Ti-24Al-11Nb, 151

microstructure of copper-bearing C-Mn weld metal: aswelded and stress-relieved states, 173

relationships between microstructure and properties of unalloyed compacted graphite cast irons, 241

Neutron irradiation

restoration phenomena of neutron-irradiated Ti-Ni shape memory alloys, 185

Nickel

crystal nucleation and glass formation in undercooled Pd-Ni-P melts, 93

crystal structures and microstructures of (Ni,CU)₃Sn alloys, 83

restoration phenomena of neutron-irradiated Ti-Ni shape memory alloys, 185

Niobium

microstructure and steady state creep in Ti-24Al-11Nb, 151

Oxides

preparation of mixed oxides: a review, 119

Oxygen

thermodynamics and structure of solidification in the fusion zone of CO₂ laser welds of 15-5 PH stainless steel, 205

Palladium

crystal nucleation and glass formation in undercooled Pd-Ni-P melts, 93

Persistent slip bands

finite element model of persistent slip band interaction with strengthened surface films during low cycle fatigue, 127

Phosphorus

crystal nucleation and glass formation in undercooled Pd-Ni-P melts, 93

Powders

sintering enhancement in dynamically compacted commercial iron powders, 231

influence of different drying conditions on powder properties and processing characteristics, 263

Pressure die casting

electron metallographic study of the commercial zincbased pressure-die-cast alloy 3, 247

Reinforcement

joining of fiber-reinforced SiC composites by in situ reaction methods, L1

Shape memory alloys

restoration phenomena of neutron-irradiated Ti-Ni shape memory alloys, 185

Silicon

joining of fiber-reinforced SiC composites by in situ reaction methods, L1

microdiffraction study of β -SiC whiskers in an SiC_w-6061Al composite, 113

Sintering

sintering enhancement in dynamically compacted commercial iron powders, 231

Solid solutions

creep in a Cu-14at.%Al solid solution alloy at intermediate temperatures and low stresses, 165

Solidification

dendrite tip radii in directionally solidified Pb-8.4at.%Au, 219

thermodynamics and structure of solidification in the fusion zone of ${\rm CO_2}$ laser welds of 15-5 PH stainless steel, 205

Stability

microstructure and stability of Fe-Cr-C hardfacing alloys,

Stainless steel

strain-controlled low cycle fatigue behaviour of type 304 stainless steel base material, type 308 stainless steel weld metal and 304-308 stainless steel weldments, 67

thermodynamics and structure of solidification in the fusion zone of CO₂ laser welds of 15-5 PH stainless steel, 205

Strain

crack extension in a material whose resistance to deformation increases with increasing strain, 11

strain-controlled low cycle fatigue behaviour of type 304 stainless steel base material, type 308 stainless steel weld metal and 304-308 stainless steel weldments, 67

Strengthening

finite element model of persistent slip band interaction with strengthened surface films during low cycle fatigue, 127

Stress

model for the effect of mean stress on the threshold condition for fatigue crack propagation, 37

creep in a Cu-14at.%Al solid solution alloy at intermediate temperatures and low stresses, 165

dislocation distributions in non-uniform stress fields, 139 microstructure of copper-bearing C-Mn weld metal: as-welded and stress-relieved states, 173

Structure

effect of structural factors on corrosion crack resistance parameters, 29

thermodynamics and structure of solidification in the fusion zone of CO₂ laser welds of 15-5 PH stainless steel, 205

Surface roughness

sensitivity of surface crack initiation to surface roughness in low-cycle fatigue at high temperture, L7

Thermodynamics

thermodynamics and structure of solidification in the fusion zone of CO₂ laser welds of 15-5 PH stainless steel, 205

Tin

crystal structures and microstructures of (Ni,Cu)₃Sn alloys, 83

Titanium

microstructural characterization of α_2 +B2 titanium aluminide intermetallic (super- α_2) using transmission electron microscopy, 193

microstructure and steady state creep in Ti-24Al-11Nb, 151

restoration phenomena of neutron-irradiated Ti-Ni shape memory alloys, 185

Transmission electron microscopy

microstructural characterization of α_2 +B2 titanium aluminide intermetallic (super- α_2) using transmission electron microscopy, 193

Weld metals

cavitational damage in AISI type 347 weld metal arising from creep deformation, 51

microstructure of copper-bearing C-Mn weld metal: aswelded and stress-relieved states, 173 strain-controlled low cycle fatigue behaviour of type 304 stainless steel base material, type 308 stainless steel weld metal and 304-308 stainless steel weldments, 67

Weldments

strain-controlled low cycle fatigue behaviour of type 304 stainless steel base material, type 308 stainless steel weld metal and 304-308 stainless steel weldments, 67

Welds

thermodynamics and structure of solidification in the

fusion zone of CO₂ laser welds of 15-5 PH stainless steel, 205

Whiskers

microdiffraction study of β -SiC whiskers in an SiC_w-6061Al composite, 113

Zinc

electron metallographic study of the commercial zincbased pressure-die-cast alloy 3, 247

